PC Components Buying Guide Quick Reference Handout

Why build your own PC?

Building your own PC offers unparalleled control, value, and satisfaction. Here's why it's a fantastic option for both tech enthusiasts and everyday users:

Scan the QR Code to read the full buying guide

- **Customization:** When you build your own PC, every component is handpicked to suit your unique needs. Whether you're a gamer craving high frame rates, a content creator requiring massive storage, or an office worker seeking a simple setup, you can tailor the specs, design, and features exactly as you want. Want RGB lighting? Prefer a silent build? It's all up to you.
- **Future-proofing:** A pre-built PC often limits your ability to upgrade, but a custom-built system ensures flexibility. As technology evolves, you can easily swap out components like the GPU, CPU, or RAM without replacing the entire machine. This adaptability saves you money in the long run while keeping your system up-to-date.
- **Performance:** Building your PC ensures that every dollar is invested in the performance that matters most to you. Instead of paying for features you don't need, you can focus your budget on the parts that make the biggest impact, like a high-end GPU for gaming or an ultra-fast SSD for seamless multitasking. The result? A machine that delivers optimal performance for your needs.

Additionally, the process of building your PC is rewarding and educational. Not only do you gain insight into how your computer works, but you also gain the satisfaction of creating something uniquely yours. It's an experience that transforms a simple machine into a personal masterpiece.

This guide breaks down every essential part, so you can make confident decisions for your build.

Understanding the components of your PC

1. **Graphics Card (GPU)**

The GPU processes visuals and renders images for gaming, video editing, and creative tasks. It's essential for high-quality graphics and smooth gameplay.

- Light gaming: Entry-level GPUs like GTX 1660 handle most casual games.
- High-resolution gaming: Choose RTX 3060 or higher for 1080p or 1440p performance.
- Professional use: Opt for GPUs like RTX 4080 for 3D rendering or video production.

2. Processor (CPU)

The CPU acts as your PC's brain, handling all core tasks and processing instructions from software.

- **Office tasks:** Intel Core i3 or Ryzen 3 are budget-friendly and effective for simple needs.
- **Gamers and creators:** Intel Core i5/i7 or Ryzen 5/7 for powerful multitasking and gaming.
- **High-end workstations:** Intel Core i9 or Ryzen 9 for professional video editing or complex simulations.

3. Motherboard

The motherboard connects all components, enabling them to communicate and work together. It also determines compatibility and potential for future upgrades.

- **Budget builds:** Look for B-series motherboards for affordability and solid performance.
- **Advanced users:** X-series or Z-series motherboards for overclocking and extra features.
- **Future-proofing:** Ensure support for newer standards like DDR5 RAM and PCIe 4.0/5.0

4. RAM (Memory)

RAM stores temporary data for your computer to quickly access while running programs. The more RAM you have, the better your system handles multitasking.

- **Casual use:** 8GB is sufficient for browsing, emails, and basic office tasks.
- **Gaming:** Opt for 16GB to handle modern games smoothly.
- **Content creation:** Choose 32GB or more for video editing, graphic design, or 3D rendering

5. PC Case

The case houses all your components, providing physical protection, airflow, and a platform to showcase your build's aesthetics.

- **Compact builds:** Choose a mini or micro ATX case for small desks.
- **Showpieces:** Mid-tower cases with tempered glass for aesthetic builds.
- **Performance-focused:** Ensure compatibility with large GPUs, extra cooling, and cable management.

6. Power Supply Unit (PSU)

The PSU converts electricity from your wall socket into usable power for your PC. It ensures your components receive a steady and reliable energy supply.

- **General builds:** 500-600W PSU is ideal for basic setups.
- **Gaming rigs:** Opt for 750W to power mid-range GPUs and CPUs.
- **High-performance builds:** 850W or more for dual-GPU setups or heavy overclocking

7. **Cooling System**

PCs generate heat, and cooling systems (air or liquid) prevent components from overheating.

- **Budget builds:** Use stock air coolers for light workloads.
- **Gaming PCs:** Upgrade to aftermarket air coolers or AIO liquid cooling for efficiency.
- **Overclockers:** Invest in custom liquid cooling for maximum thermal management.

8. **Storage (SSD vs. HDD)**

Storage determines where and how your data is saved.

- **SSD (Solid-State Drive):** Faster, more reliable, and ideal for operating systems and frequently used apps.
- **HDD (Hard Disk Drive):** Offers larger storage at a lower cost, suitable for archiving files.

- **Everyday use:** A 500GB SSD is perfect for fast boot times and essential programs.
- **Gamers:** A 1TB SSD ensures quick game loading, paired with an HDD for extra storage.
- **Creators:** Use a 2TB SSD for high-speed access to large project files.